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ABSTRACT

The study was conducted to determine (1) if Anglo and Mexican American 6th-grade students differed significantly on measures of global and academic self-concepts and (2) the relationship of academic achievement to these self-concepts. A sample of 172 Anglo and 160 Mexican American students from 16 elementary schools in a southern New Mexico city was stratified by 3 socioeconomic levels. The Piers-Harris Children's Self Concept Scale and a 5-item factor-analyzed scale developed from existing research were used to measure self-concept. Student achievement was measured by teacher-assigned grades in reading, arithmetic, and social studies and by the Iowa Test of Basic Skills. A 3-way analysis of variance model (with students classified according to ethnicity, sex, and socioeconomic level) was used to test differences between students. Results indicated no significant differences between ethnic groups in terms of academic and global self-concepts, and no sex differences were found. Significant differences were found in both self-concept measures between socioeconomic levels. High socioeconomic level was associated with high self-concept and low socioeconomic level was associated with low self-concept. However, middle-socioeconomic-level Mexican American students' academic self-concept scores were almost the same as those of low-socioeconomic-level Anglo and Mexican American students. Results of actual achievement were consistent with findings of previous studies, and correlation analysis of the relationships between self-concept and achievement did not yield a consistent pattern across socioeconomic levels. (NQ)

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A STUDY OF THE RELATIONSHIP OF GLOBAL SELF-CONCEPT, ACADEMIC SELF-CONCEPT, AND ACADEMIC ACHIEVEMENT AMONG ANGLO AND MEXICAN-AMERICAN SIXTH GRADE STUDENTS

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A STUDY OF THE RELATIONSHIP OF GLOBAL SELF-CONCEPT, ACADEMIC SELF-CONCEPT, AND ACADEMIC ACHIEVEMENT AMONG ANGLO AND MEXICAN-AMERICAN SIXTH GRADE STUDENTS

Mexican-American students have been characterized in the professional literature as having a negative self-concept (e.g. Manual, 1965). However, recent research results have yielded results which conflict with this stereotype view. For example, Carter (1968) found no significant difference in global self-concept between Anglo and Mexican-American ninth grade students. Similarly, Cooper (1971) reported that Anglo and Mexican-American twelfth grade students were not significantly different in self-perception. DeBlassie (1970) reported similar findings with ninth grade Anglo, Mexican-American, and Negro students. Other researchers, using the construct of self-concept of ability developed by Brookover (1967), have reported conflicting results when comparing Anglo and Mexican-American students. Anderson (1967) and Johnson (1968) found no significant difference between the two groups at the high school level. In contrast, Evans (1969) reported that the Anglo students in his sample of ninth grade students had a significantly higher self-concept of ability than did the Mexican-American students.

The relationship of self-concept to achievement has been documented in several literature reviews (e.g. Lavin, 1965; Boocock, 1966). Moreover, researchers have demonstrated a relationship between self-concept of ability and achievement (Coleman, 1966; Anderson, 1968; Brookover, 1964, 1967). However, there has been no research contrasting the relationship of achievement to global self-concept and academic self-concept.

Purposes Of The Study

The purposes of the present study were to determine: (1) if Anglo and Mexican-American sixth grade students differed significantly on measures of global self-concept and academic self-concept, and (2) the relationship of academic achievement to global self-concept and academic self-concept.

Sample

The sample for the study consisted of 172 Anglo and 160 Mexican-American sixth grade students from 16 elementary schools in a city in Southern New Mexico. Prior to selection of the sample, the sixth grade population for each ethnic group was stratified by socioeconomic level. A non-proportional stratified random sampling technique was then used to obtain a student sample with each socioeconomic level.

Instruments

Two measures of self-concept were administered to the students. The Piers-Harris Children's Self Concept Scale, entitled "The Way I Feel About Myself,"

was used as a measure of students' global self-concept. The scale, which requires approximately a third grade reading level, consists of eighty simple declarative statements which are coded "yes-no." The student is instructed to mark "yes" if an item describes him and "no" if the item does not describe him. The items are scored according to a scoring key and summed to provide a general self-concept score.

Academic self-concept was measured by a five-item scale developed from existing research (e.g. Brookover, 1967; Anderson and Johnson 1968). The items were scaled using a factor analysis program which extracted components by means of a principal-axes solution. All five items loaded on a single component accounting for 74 percent of the variation. Factor scores were computed for each individual in the sample as a part of the analysis. The factor scores were used in the subsequent analysis of the data.

Student achievement was measured by teacher-assigned grades and by a standardized achievement test. The teacher-assigned grades selected for the study were reading grades, arithmetic grades, and social studies grades. The standardized achievement test was the Iowa Test of Basic Skills. The Iowa Test of Basic Skills consists of four subtests (vocabulary, reading, language skills, and arithmetic skills) and a total composite score.

Results

A three-way analysis of variance model, with students classified according to ethnicity, sex, and socioeconomic level, was used to test differences between the students in the sample. An analysis of variance was performed for each of the self-concept and achievement measures using Harvey's (1960) least squares analysis of variance for unequal subclass numbers.

The results of the analyses of variance of the Piers-Harris Self Concept Scale and the academic self-concept scale, summarized in Table I, indicated that there were no significant differences between the Anglo and Mexican-American groups and no differences due to sex. However, a significant main effect due to socioeconomic level was found for both the self-concept scales. Comparisons of the three socioeconomic levels using Duncan's Multiple Range Test indicated that there were significant differences between each of the three socioeconomic levels for both scales. However, examination of the subclass means of the academic self-concept scale (Appendix A) indicated that Mexican-American middle and low socioeconomic level students had almost identical mean scores. This trend was not apparent on the Piers-Harris Self Concept Scale. Further examination of the Piers-Harris Self-Concept Scale revealed that although the low socioeconomic level students had the lowest scores, they did not score unusually low. According to the test publisher, a score of 45-55 should be considered average. The mean scores for the low socioeconomic Anglo and Mexican-American groups were 52.6 and 50.6 respectively.

Achievement differences among the students were examined using the same three-way analysis of variance model. The findings of the analyses of teacher-assigned grades and the Iowa Test of Basic Skills are presented in Table I.

The results of the analyses of variance of teacher-assigned grades indicated that Anglo and Mexican-American students differed significantly on reading grades,

but not on arithmetic grades or social studies grades. Anglo students as a group received higher reading grades than their Mexican-American classmates. In contrast, sex differences were found for all three sets of grades. In each instance, females had significantly higher grades than their male counterparts. A significant main effect due to socioeconomic level was also found for all three sets of grades. High socioeconomic level was associated with high grades and low socioeconomic level was associated with low grades for each of the three subjects.

TABLE I

ANALYSIS OF VARIANCE OF SELF-CONCEPT AND ACHIEVEMENT MEASURES

Measure	Ethnicity	Sex	Socioeconomic Level
Piers-Harris S-C Test	N.S.	N.S.	<.01
Academic S-C Scale	N.S.	N.S.	<.01
Reading Grade	<.05	<.05	<.01
Arithmetic Grade	N.S.	<.05	<.01
Social Studies Grade	N.S.	<.01	<.01
ITBS Vocabulary Subtest	<.01	N.S.	<.01
ITBS Reading Subtest	<.01	N.S.	<.01
ITBS Language Skills Subtest	<.01	<.01	<.01
ITBS Arithmetic Skills Subtest	<.01	N.S.	<.01
ITBS Composite Score	<.01	N.S.	<.01

The analyses of variance of the Iowa Test of Basic Skills showed that the Anglo students scored significantly higher than the Mexican-American students on each of the four subtests and the composite score. A significant main effect due to socioeconomic level was also found for each of the four subtests and the composite score. High achievement was associated with high socioeconomic level for both Anglo and Mexican-American students. A significant sex difference was found only for the language skills subtest. Females scored significantly higher than males on this subtest.

The relationships of self-concept to achievement was analyzed using separate correlation analyses for Anglo students and Mexican-American students. Within each ethnic group, separate analyses were conducted with the groups partitioned according to socioeconomic level and sex.

The first correlational analysis, summarized in Tables II and III, compared Mexican-American students' self-concept and achievement across socioeconomic levels.

The correlations presented in Table II indicated that academic self-concept was significantly related to achievement only for the middle socioeconomic group. Only one significant relationship (social studies grade) was found for the low socioeconomic group, and no significant relationships occurred in the high socioeconomic group.

TABLE II

CORRELATION OF ACADEMIC SELF-CONCEPT WITH ACHIEVEMENT
(Mexican-American Students)

Measure	Socioeconomic Level High (n=31)	Middle (n=67)	Low (n=62)
Reading Grade	.308	.404**	.165
Arithmetic Grade	.198	.208	.026
Social Studies Grade	-.004	.304*	.280*
ITBS Vocabulary Subtest	.098	.338**	.084
ITBS Reading Subtest	.265	.545**	.151
ITBS Language Skills Subtest	.043	.456**	.148
ITBS Arithmetic Skills Subtest	.163	.400**	.094
ITBS Composite Score	.154	.499**	.117

*Significant at α = .05
**Significant at α = .01

TABLE III

CORRELATION OF GLOBAL SELF-CONCEPT AND ACHIEVEMENT
(Mexican-American Students)

Measure	Socioeconomic Level High (n=31)	Middle (n=67)	Low (n=62)
Reading Grade	.175	.318*	.256*
Arithmetic Grade	.055	.156	.184
Social Studies Grade	-.161	.142	.315*
ITBS Vocabulary Subtest	-.046	.382**	.246
ITBS Reading Subtest	-.056	.381**	.241
ITBS Language Skills Subtest	.078	.195	.247
ITBS Arithmetic Skills Subtest	-.038	.132	.290*
ITBS Composite Score	-.017	.298*	.279*

*Significant at α = .05
**Significant at α = .01

The correlations between global self-concept and achievement in Table III suggested a pattern of significant relationships somewhat similar to those of academic self-concept and achievement. However, for the middle socioeconomic group, three of the correlation coefficients which were significant for academic self-concept were not significant for global self-concept. These correlations were with social studies grades, Iowa Test of Basic Skills Language Skills Subtest, and Iowa Test of Basic Skills Arithmetic Skills Subtest. Another contrast between the correlation patterns for academic self-concept and global self-concept was found for the low socioeconomic group. In this instance, three correlations which were not significant for academic self-concept were found to be significant for global self-concept. The three correlations were with reading grades, Iowa Test of Basic Skills Arithmetic Skills Subtest, and Iowa Test of Basic Skills composite score.

In order to determine if the differences in the correlation patterns relating achievement with academic self-concept and global self-concept were chance occurrences, the correlation coefficients were tested using a t-test for dependent correlations (Bruning and Kutz, 1968). The results of this analysis indicated that for the middle socioeconomic group there were statistically significant differences between the two sets of correlations only for two subtests of the Iowa Test of Basic Skills language skills and arithmetic skills. In these two instances, the correlation between academic self-concept and the achievement measure was significantly greater than the correlation between global self-concept and the achievement measure. All other differences noted between the correlation patterns in Tables II and III could be attributed to chance.

The correlation analysis relating Anglo students' academic self-concept scores and achievement across socioeconomic levels (Table IV) indicated that significant relationships existed for all three socioeconomic levels. However, for the low socioeconomic Anglo group, the relationship was primarily with arithmetic achievement. For this group, both the arithmetic grade and Iowa Test of Basic Skills Arithmetic Skills Subtest were significantly related to academic self-concept. Only one other significant relationship (social studies grade) was found for the low socioeconomic group. In contrast, all eight achievement measures were significantly related to academic self-concept for the middle socioeconomic group. Similarly, all but one achievement measure (arithmetic grade) were significantly correlated with academic self-concept for the high socioeconomic group.

Correlations between global self-concept and academic achievement for the Anglo students followed a pattern similar to that found between academic self-concept and achievement (Table V). Both arithmetic achievement measures were significantly related to global self-concept for the low socioeconomic group. In contrast to the correlation with academic self-concept global self-concept was not significantly correlated with social studies grades. For the middle socioeconomic group, seven of the eight achievement measures were significantly correlated with global self-concept. However, the correlations were smaller than those found for academic self-concept. An examination of the correlation coefficients on the high socioeconomic group indicated that there were significant relationships for five of the eight achievement measures. Two correlations which were significant for academic self-concept for the high socioeconomic group were not significant for global self-concept. These correlations were with reading grades and ITBS Arithmetic Skills Subtest.

TABLE IV

CORRELATION OF ACADEMIC SELF-CONCEPT WITH ACHIEVEMENT
(Anglo Students)

Measure	Socioeconomic Level		
	High (n=61)	Middle (n=62)	Low (n=49)
Reading Grade	.429**	.411**	.128
Arithmetic Grade	.235	.464**	.386**
Social Studies Grade	.395**	.501**	.298*
ITBS Vocabulary Subtest	.566**	.463**	-.070
ITBS Reading Subtest	.560**	.446**	.151
ITBS Language Skills Subtest	.427**	.495**	.207
ITBS Arithmetic Skills Subtest	.410**	.501**	.374**
ITBS Composite Score	.527**	.512**	.203

*Significant at α = .05
**Significant at α = .01

TABLE V

CORRELATION OF GLOBAL SELF-CONCEPT WITH ACHIEVEMENT
(Anglo Students)

Measure	Socioeconomic Level		
	High (n=61)	Middle (n=62)	Low (n=49)
Reading Grade	.207	.303*	.264
Arithmetic Grade	.089	.217	.538**
Social Studies Grade	.360**	.270*	.247
ITBS Vocabulary Subtest	.258*	.372**	.052
ITBS Reading Subtest	.256	.375**	.160
ITBS Language Skills Subtest	.331*	.464**	.174
ITBS Arithmetic Skills Subtest	.240	,393**	.295*
ITBS Composite Score	.296*	.456**	.193

*Significant at α = .05
**Significant at α = .01

The correlations between the Anglo students' academic self-concept and achievement were contrasted with the correlations between global self-concept and achievement using a t-test for dependent correlations. The analysis yielded two significant t-statistics for the high socioeconomic group. For this group, the correlation of academic self-concept with the Iowa Test of Basic Skills Vocabulary Subtest and the Iowa Test of Basic Skills Reading Subtest was significantly higher. Two significant t-statistics were also detected for the middle socioeconomic group. In this instance, reading grades and social studies grades had significantly higher correlations with academic self-concept than with global self-concept. No significant differences between the two sets of correlations were found for the low socioeconomic level group.

In order to determine if the relationship of self-concept to achievement was similar across the sex variable, separate correlation analyses were conducted for boys and girls within each ethnic group. The correlation analyses for Mexican-American students, presented in Table VI, indicated that academic self-concept was more highly correlated with achievement for Mexican-American males than for females. Every achievement measure was significantly related to academic self-concept for the boys while only three significant correlations were found for the girls. In contrast, global self-concept was significantly correlated with six of the eight achievement measures for both boys and girls.

The results of the correlation analysis suggested that Mexican-American boys' achievement was more closely related to academic self-concept than global self-concept, but that for the Mexican-American girls the opposite was true. A series of t-tests performed on the two sets of correlations indicated that only one pair of correlation coefficients was significantly different for each sex. The boys' Iowa Test of Basic Skills Arithmetic Skills Subtest had a significantly higher correlation with academic self-concept than with global self-concept. In contrast, the girls' scores on the Iowa Test of Basic Skills Vocabulary Subtest had a significantly higher correlation with global self-concept than with academic self-concept.

The correlation analysis for the Anglo groups, presented in Table VII, indicated that academic self-concept was significantly correlated with each achievement measure for both boys and girls. Global self-concept was also significantly related to every achievement measure for both sexes. A comparison of the two sets of correlations for both boys and girls show that each of the correlations for academic self-concept was the same or larger than those for global self-concept. Tests of significance between the correlations indicated that the Anglo boys had significantly higher correlations between academic self-concept and three achievement measures (arithmetic grade, Iowa Test of Basic Skills Arithmetic Skills Subtest, and Iowa Test of Basic Skills score). In contrast, no significant differences were observed for the Anglo girls.

TABLE VI

CORRELATION OF SELF-CONCEPT WITH ACHIEVEMENT
(Mexican-American Male and Female)

Measure	Academic Self-Concept		Global Self-Concept	
	Male (n=82)	Female (n=78)	Male (n=82)	Female (n=78)
Reading Grade	.326**	.292*	.296**	.379**
Arithmetic Grade	.240*	.081	.221	.213
Social Studies Grade	.405**	.151	.333**	.190
ITBS Vocabulary Subtest	.370**	.161	.338**	.404**
ITBS Reading Subtest	.430**	.329**	.298*	.420**
ITBS Language Skills Subtest	.415**	.219	.297*	.297*
ITBS Arithmetic Skills Subtest	.417**	.180	.217	.309**
ITBS Composite Score	.451**	.239*	.315**	.386**

*Significant at $\alpha = .05$
**Significant at $\alpha = .01$

TABLE VII

CORRELATION OF SELF-CONCEPT WITH AVHIEVEMENT
(Anglo Male and Female)

Measure	Academic Self-Concept		Global Self-Concept	
	Male (n=88)	Female (n=84)	Male (n=88)	Female (n=84)
Reading Grade	.407**	.405**	.340**	.293*
Arithmetic Grade	.525**	.349**	.346**	.352**
Social Studies Grade	.456**	.445**	.289*	.376**
ITBS Vocabulary Subtest	.350**	.400**	.248*	.291*
ITBS Reading Subtest	.436**	.478**	.275*	.367**
ITBS Language Skills Subtest	.459**	.410**	.304**	.364**
ITBS Arithmetic Skills Subtest	.574**	.386**	.324**	.356**
ITBS Composite Score	.519**	.431**	.333**	.368**

*Significant at $\alpha = .05$
**Significant at $\alpha = .01$

Summary and Conclusions

The results of this study indicated that there were no significant differences between Anglo and Mexican-American sixth grade students on measures of academic and global self-concept. Furthermore, no sex differences were found on these measures. Significant differences were found on both measures between socioeconomic levels. High socioeconomic level was associated with high self-concept scores and low socioeconomic level was associated with low self-concept scores for both Anglo and Mexican-American students. These results lend support to the concept of a culture of poverty (Lewis, 1963). However, one surprising result was the middle socioeconomic level Mexican-American students academic self-concept scores were almost identical to those of the low socioeconomic Mexican-American and Anglo students.

The anlyses of the achievement measures showed that the Anglo students scored significantly higher on all four subtests and the composite score of the Iowa Test of Basic Skills. In addition, they received higher reading grades than the Mexican-American sample. However, arithmetic and social studies grades were similar for the two groups. Sex differences were found for all three teacher-assigned grades and one ITBS Subtest (arithmetic skills). The results are consistent with previous studies comparing Anglo and Mexican-American achievement levels (Coleman, 1966).

The correlation analysis of the relationships between self-concept and achievement did not yield a consistent pattern across socioeconomic levels. For the Mexican-American sample, academic self-concept was significantly related to achievement only among the middle socioeconomic group. However, for the low socioeconomic level group, a weak relationship between achievement and global self-concept was found. The correlation patterns for the Anglo group differed from that of the Mexican-American sample in that significant correlations between academic self-concept and achievement were found primarily for the high and middle socioeconomic groups. The pattern was similar for global self-concept and achievement, although fewer correlations were significant and the correlation coefficients were somewhat smaller. The results of the analyses support the following conclusions:

1. Achievement is not significantly related to either academic or global self-concept among high socioeconomic level Mexican-American students.

2. Achievement is more closely related to academic self-concept than to global self-concept among middle socioeconomic level Mexican-American students.

3. A weak relationship exists between achievement and global self-concept among low socioeconomic level Mexican-American students. Academic self-concept is not significantly related to achievement for these students.

4. Achievement is more closely related to academic self-concept than to global self-concept among high and middle socioeconomic level Anglo students.

5. A weak relationship exists between achievement and self-concept for low socioeconomic Anglo students. There is little difference between the relationship of achievement with academic and global self-concept among these students.

The correlation analysis of self-concept and achievement among males and females yielded different patterns for the Anglo and Mexican-American samples. For the Mexican-American group, academic self-concept was significantly related to all the achievement measures for boys but with only three achievement measures for girls. There were fewer significant correlations between global self-concept and achievement for the boys, but more for the girls. In contrast, the correlation matrix for Anglo boys and girls yielded similar patterns for academic and global self-concept. The primary difference between the correlation matrices was that the correlations between academic self-concept and the achievement measures were larger than those for global self-concept and achievement for both boys and girls. The following conclusions are presented on the basis of the analyses:

1. Achievement is more closely related to academic self-concept than to global self-concept among Mexican-American boys.

2. Achievement is more closely related to global self-concept than to academic self-concept among Mexican-American girls.

3. Achievement is more closely related to academic self-concept than to global self-concept among Anglo boys and girls.

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APPENDIX A

SUBCLASS MEANS BY ETHNICITY AND SOCIOECONOMIC LEVEL

	Anglo			Mexican-American		
	High	Middle	Low	High	Middle	Low
Academic S-C	0.429	0.074	- 0.225	0.304	- 0.227	- 0.234
Piers-Harris S-C	60.21	59.29	52.59	62.19	54.76	50.61
Reading Grade	4.19	3.80	3.35	3.94	3.48	3.30
Arithmetic Grade	3.83	3.35	2.96	3.76	3.05	3.02
Social Studies Grade	4.02	3.77	3.38	4.11	3.47	3.18
ITBS Vocabulary Subtest	7.68	6.88	6.47	7.18	5.86	5.24
ITBS Reading Subtest	7.78	6.86	6.28	7.15	5.91	5.66
ITBS Language Skills Subtest	7.95	6.94	6.70	7.79	6.31	6.13
ITBS Arithmetic Skills Subtest	7.42	6.47	6.10	6.91	5.86	5.77
ITBS Composite Score	7.77	6.85	6.45	7.32	6.05	5.77

SUBCLASS MEANS BY ETHNICITY AND SEX

	Anglo		Mexican-American	
	Male	Female	Male	Female
Academic S-C	0.092	0.143	- 0.222	- 0.025
Piers-Harris S-C	56.65	58.86	53.81	55.43
Reading Grade	3.67	3.95	3.30	3.70
Arithmetic Grade	3.26	3.58	3.04	3.32
Social Studies Grade	3.57	3.94	3.32	3.66
ITBS Vocabulary Subtest	7.13	7.01	5.69	6.13
ITBS Reading Subtest	7.09	7.02	5.95	6.21
ITBS Language Skills Subtest	7.00	7.54	6.13	7.00
ITBS Arithmetic Skills Subtest	6.70	6.77	5.94	6.16
ITBS Composite Score	7.05	7.13	6.01	6.42